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The remaining claim rejections are as follows:

claims 1, 2, 4, 5, 7-10, 12, 21, 24, 26 and 27 were rejected under 35 U.S.C. § 102(e) in view of U.S. Pat. No. 5,162,281 ("Kamo");

claims 3, 6 and 13 were rejected under 35 U.S.C. § 103(a) in view of Kamo; and

claims 42-44 and 47-51 were rejected under 35 U.S.C. § 112, ¶ 2.

Applicants respectfully traverse these remaining rejections and submit that these remaining claims are also allowable.

I. Claims 1, 2, 4, 5, 7-10, 12, 21, 24, 26 and 27 Are Novel Over Kamo

Applicants respectfully traverse the rejection of claims 1, 2, 4, 5, 7-10, 12, 21, 24, 26 and 27 under 35 U.S.C. § 102(e) in view of Kamo.

For a reference to anticipate a claim, it must contain all of the elements of the claim. *Hybritech Inc. v. Monoclonal Antibodies, Inc.* 802 F.2d 1367, 1379 (Fed. Cir. 1986); *In re Marshall*, 578 F.2d 301, 304 (C.C.P.A. 1978). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. See *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716 (Fed. Cir. 1984).

A. There Is No Teaching In Kamo Of Fibril Forming Catalysts

As the Examiner admits, Kamo does not disclose, teach or even suggest the formation of any carbon fibrils. Office Action, p. 3.

At the outset, Applicants' claims require the use of a fibril forming catalyst. Such limitation cannot be ignored when determining the patentability of Applicants' claims. Kamo's catalysts are used for the hydrotreating hydrocarbon oil, such as reducing the sulfur content in oil, and not for fibril-forming processes. (Col. 1, lines 6-9).

Thus, there is no evidence that Kamo's catalyst result in the production of carbon fibrils. Furthermore, Kamo specifically teaches that his catalysts do not work for the purpose of his invention until they are treated with an organic sulfur compound:

> The active metals are supported on the catalyst material in the form of their oxides which are not active. Therefore, suitable pre-sulfurization is applied to the catalyst so as to convert the oxides into the corresponding sulfides before use.

Col. 1, lines 20-25. Also, col. 2, lines 50-56. In fact, Kamo even provide examples to support that the active catalyst is the metal sulfides, and thus require a sulfur element which is not present in the Applicants' invention as claimed. In particular, each of Kamo's examples 1-10 which Kamo discloses as his invention teaches the use of a sulfur compound (*i.e.*, mercaptoethanol, thio-diglycol, mercapto-acetic acid, dimercaptosuccinic acid, mercapto-propionic acid, etc.) to treat the catalyst. In contrast, Kamo's comparative examples 1 and 2, which attempts to form catalysts without a sulfur component (but includes other ingredients such as phosphorus), results in inefficient catalysts with the poorest relative rate constant as shown in Table 1 (col. 9).

On the other hand, Applicants' fibril forming catalysts specifically result in high yield of carbon fibrils without any treatment with a sulfur compound. Therefore, there is nothing in Kamo which teaches or even suggests that the Kamo catalysts will work for the production of carbon fibrils and thus, Kamo does not teach the invention of Applicants' claims.

Furthermore, it has been further held that a reference must either be in the field of applicants' endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned with in order for it to be relied upon as a basis for rejection of a claimed invention. See In re Oetiker, 24 U.S.P.Q.2d 1443 (Fed.Cir. 1992). Therefore, since Kamo, which concerns use of catalysts to make hydrocarbon oil with reduced sulfur content, is

not in the carbon fibril field and is unrelated to the problems solved by Applicants' invention, Kamo may not be relied on as a basis for rejection Applicants' claims.

Thus, withdrawal of this rejection of claims 1, 2, 4, 5, 7-10, 12, 21, 24, 26 and 27 is respectfully requested.

B. Kamo's Carboxylate Do Not Improve Fibril Production

Applicants' claims 1, 2, 4, 5, 7-10, 12, 21 and 27 further require the use of "an effective yield enhancing amount of a carboxylate" to improve the yield of a fibril-forming catalyst.

However, Kamo only teaches the use of hydrocarboxylic acid as a complexing agent with the metal ions to avoid the thermal coagulation of the active metal sulfides which are supported on the material in the form of a high dispersion (Col. 1, lines 65-66, col. 2, lines 4-8). There is nothing in Kamo which teaches or suggests the use of carboxylate in an amount to improve the yield of a fibril-forming catalyst.

Therefore, withdrawal of this rejection is also respectfully requested based on this ground.

II. Claims 3, 6, and 13 Are Nonobvious In View Of Kamo

For the same reasons as explained above, *supra*, Section I, claims 3, 6 and 13 are also patentable over Kamo.

Additionally, Kamo does not disclose any of the further limitations of claims 3, 6, or 13. For example, Kamo does not disclose or suggest to treat the catalyst support with carboxylate before the catalyst is supported thereupon as recited in claim 3. Nor does Kamo disclose or suggest to treat the catalyst support with carboxylate after the catalyst is supported thereupon as recited in claim 6. Kamo also does not teach or suggest precipitating the fibril producing catalytic metal onto a slurry of support particles as recited in claim 13.

There is no indication that Kamo suggests any of these additional methods, or that they would be an obvious expedient. Therefore, withdrawal of this rejection is respectfully requested.

Additionally, Kamo does not teach a coprecipitation step by adjusting the pH of the solution as claimed in Applicants' new claims 72 and 73. Therefore, claims 72 and 73 are patentable over Kamo for this additional reason as well.

III. Claims 42-44 and 47-51 Are Definite

Contrary to the Examiner's position, Applicants respectfully submit that the term "high degree of structure" in claims 42-44 and 47-51 is definite and clear. The term "high degree of structure" is clearly defined in the specification on p. 16, under section heading "carbon supports" as follows:

> Carbon particles having a high porosity, i.e., a low bulk density, and a high surface area are said to have a high degree of structure.

Specification, p. 16, lines 15-17.

Therefore, claims 42-44 and 47-51 are not indefinite and withdrawal of this rejection under 35 U.S.C. § 112, ¶ 2 is respectfully requested.

IV. Conclusion

In light of the above, Applicants respectfully submit that pending claims 1-21, 24-27, 30-32, 35-39, 42-44, 47-51, 72 and 73 are now in condition for allowance and notice to that effect is respectfully requested.

No new matter has been added.

If there are any further points requiring attention prior to allowance, the Examiner is asked to contact Applicant's counsel.

No extra fee is required. If there are additional fees, please charge them to our firm Deposit Account No. 50-0540.

Respectfully submitted,

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